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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/992,509 | 11/06/2001 | Augustinus F.H. Basstein | 03330-P0011A LHR | 6812 |

24126 7590 03/03/2004

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| EXAMINER |
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PEZZLO, BENJAMIN A

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| ART UNIT | PAPER NUMBER |
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3683

DATE MAILED: 03/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,509

Applicant(s)

BASSTEIN

Examiner

Benjamin A Pezzlo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bagg (US 3727574) in view of Tomaselli (US 6073510).

Bagg discloses a gear transmission including a first shaft 3, an intermediate shaft 23 which is parallel to the first shaft, a first cylindrical pinion 27 having a first set of teeth and which is mounted to rotate with the first shaft, a second cylindrical pinion 28 having a second set of teeth and mounted to rotate with the intermediate shaft, the first and second sets of teeth of the first cylindrical pinion and the second cylindrical pinion having the same number of teeth and the same diameter and meshing with one another, a third cylindrical pinion 16 which is mounted to rotate with the first shaft, a fourth cylindrical pinion 21 which is mounted to rotate with the second shaft, the sets of teeth of the third cylindrical pinion and the fourth cylindrical pinion having the same number of teeth and the same diameter, a double toothed face gear 18 mounted between and respectively meshing with the sets of teeth of the third cylindrical pinion and the fourth cylindrical pinion, the double-toothed face gear being able to rotate about a second shaft 20 which forms an angle with the first shaft, wherein the double toothed face gear is provided with coupling teeth 19 for slideably coupling the rotation of the double toothed face gear to the rotation of the second shaft.

Bagg fails to disclose direction of the coupling teeth being perpendicular to a plane of the coupling teeth of the double toothed face gear. Tomaselli discloses a gear transmission including a double toothed face gear, the direction of the coupling teeth being perpendicular to the axis of the second shaft. It would have been obvious to one of ordinary skill in the art to which the invention pertains at the time the invention was made to have provided the double toothed face gear of Bagg with the coupling teeth being perpendicular to the axis of the second shaft according to the teachings of Tomaselli in order to relieve the second shaft of significant axial loads (see col. 2 lines 54-57 of Tomaselli).

Bagg further fails to disclose the combination of a power splitter with a differential. However, note that Bagg's power splitter is provided in the field of vehicle propulsion, specifically, on an outboard motor. Also note that the face gear of Bagg is slidably mounted on the output shaft of the motor. Accordingly, it would have been obvious to one of ordinary skill in the art to which the invention pertains at the time the invention was made to have combined the power splitting arrangement of Bagg with a face gear on a differential housing in order to allow for smaller diameter shafts.

Re claims 2-6 and 9, see Fig. 1 of Bagg.

Re claims 7 and 8, the use of helical teeth in gear transmissions is notorious. It would have been obvious to one of ordinary skill in the art to which the invention pertains at the time the invention was made to have provided the helical teeth in a gear transmission according to Bagg in view of Tomaselli in order to decrease gear noise.

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Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin A Pezzlo whose telephone number is (703) 306-4617. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on (703) 308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Benjamin A Pezzlo
3/2/04

Benjamin A Pezzlo
Examiner
Art Unit 3683

BAP
March 2, 2004